# SAMPLING ANALYSIS PLAN
# FOR
# MAGNA METALS SITE
# CORTLANDT, NEW YORK

**PREPARED FOR:**

**BAKER PROPERTIES**
**485 WASHINGTON AVENUE**
**PLEASANTVILLE, NEW YORK 10570**

**PREPARED BY:**

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# 1.0 INTRODUCTION

Representatives from IT Corporation met with Baker Properties at the Magna Metals site, located in Cortlandt, New York, on October 15, 1991.

At this time a site reconnaissance was conducted to locate and assess locations which had been previously sampled by state or local agencies; the last round of sampling having occurred in May of 1984.

The purpose of this sampling and analysis plan is to assess the current environmental conditions at the site using representative locations, preferably those previously sampled by the agencies.

Analytical parameters for the project will be similar to the analytes used in past investigations, assuming they were selected based on historical information. Past analytical programs selected for the site included volatile organic compounds and metals.

All field sampling activities laboratory coordination and report generation will be completed by IT Corporation's Field Analytical Services (ITFAS) group located in Avenel, New Jersey.

All laboratory analyses will be completed by the IT Analytical Services NYDOH and NYDEC certified laboratory, located in Edison, New Jersey.

A final report including the analytical results will be issued approximately six weeks after sampling occurs.

## 2.0 PROPOSED SCOPE OF WORK

IT proposes a limited, yet comprehensive plan that characterizes the major areas and media identified as impacted through previous investigations.

This includes the leaching pits, stream sediments, and surface water.

### 2.1 LEACHING PIT INVESTIGATION

IT proposes to sample two leaching pits at the site. A total of six leaching pits have been identified through past site activities. These six pits are located at the northeast corner of the site, approximately fifty to one hundred feet from the rear of the building.

IT will collect samples from Pit A and Pit 2. The location of these pits is presented in Figure 1. These leaching pits were chosen as they remained a constant location with similar identification throughout the 1982, 1983, and 1984 sampling events. Therefore, the historical data generated from these locations would appear more valid and reliable.

During the October site walk, Pit A contained both standing water and sediment, Pit 2 contained only a dried sediment.

Therefore, IT will collect one water sample and one sediment sample from Pit A and one sediment sample from Pit 2.

All samples will be analyzed for total priority pollutant metals and priority pollutant volatile organics with a forward library search. In addition, the leaching pit sediment sample displaying the highest total metals result will be analyzed for TCLP metals.

## 2.2 SURFACE WATER INVESTIGATION

IT proposes to collect two surface water samples from the watershed area surrounding the site. Past sampling indicates chlorinated solvents detected in surface waters behind the Lightron building, which may indicate an upstream source in addition to or instead of the Magna Metals property.

IT will collect a water sample from waters lying at the base of the slope behind Magna Metals, as well as upstream of this tributary's confluence with the larger brook.

Approximate locations of these sampling locations are indicated in Figure 1. Samples will receive analysis for priority pollutant volatiles + 15 and total priority pollutant metals.

## 2.3 STREAM SEDIMENT INVESTIGATION

At the previously identified locations, IT will also collect sediment samples from the tributary and brook stream beds.

**Analysis of the sediments will be identical to the parameters selected for the surface waters.**

**As with the leaching pits, the sediment sample displaying the highest total metals will be reanalyzed for TCLP metals.**

# 3.0 SAMPLING METHODS

## 3.1 LEACHING PIT SAMPLING

Standing water located in the leaching pits will be sampled using a 4 inch diameter Teflon® bailer. The bailer will be lowered into the standing water so as not to agitate the sample.

Upon retrieval of the bailer, sample aliquots destined for volatiles analysis will be immediately transferred to 40 ml glass purge vials.

The remaining water will be transferred to the proper container for metals analysis and preserved to a pH of 2 with 10% nitric acid solution.

Sediment samples will be collected using a stainless steel hand auger with an extension handle. Sample aliquots destined for volatiles analysis will be collected directly from the auger into the appropriate laboratory clean container.

The remaining soils will be thoroughly homogenized in a stainless steel mixing pan before collection into the appropriate container for metals analysis.

## 3.2 SURFACE WATER SAMPLING

Sampling of surface waters will occur by submersing the appropriate container below the surface of the water and

removing the cap. The sample is collected with as little agitation as possible.

## 3.3 SEDIMENT SAMPLING

Stream sediments will be sampled using a stainless steel auger. A six inch depth increment from the stream bed will be collected. As with Section 3.1, samples destined for volatiles analysis will be collected directly from the auger.

The remaining sediment will be homogenized prior to collection in the appropriate laboratory clean container.

## 4.0 SAMPLE DOCUMENTATION QA/QC

Sample integrity is a key element in this type of project. Sample integrity documents the validity of the analysis, and can be used for legal documentation (if required). Sample integrity is maintained by ITFAS through proper sample handling and documentation in the field, as well as sample tracking documents required by IT Analytical Services.

All reusable sampling equipment employed by the ITFAS group will be thoroughly decontaminated between each sampling location using the following widely accepted protocol:

1. Non-phosphate soap and water rinse
2. Tap water rinse
3. Deionized water rinse
4. 10% nitric acid rinse
5. Deionized water rinse
6. Acetone rinse
7. Air dry
8. Deionized water rinse

All decontamination rinsate will be collected prior to proper disposal.

In addition to the equipment decontamination protocol previously outlined, latex gloves are worn by sampling personnel and changed between sampling locations to prevent cross-contamination. All sample containers used by ITFAS are certified clean to EPA standards.

All sampling is completely documented in the field using the IT Sample Collection Log; which may include maps, drawings and descriptions of the sampling location, sample date and time, as well as volume and type of sample (matrix). In addition, each sample is assigned a unique I.D. number for tracking and reference purposes. IT Chain-of-Custody and Request-for-Analysis forms will be completed on site for each day sampling occurs to accompany samples off site to the laboratory. Photo/documentation of the project will also occur when useful.

All samples will be transported to the laboratory on ice, packed in a cooler which has been sealed with IT Sample Custody Tape to prevent tampering.

## 4.1 FIELD BLANK

Field blanks are used to prevent a check on sampling instruments used to collect and transfer samples from point of collection into sample containers. FAS conducts field blanks using two identical sets of sample containers, one filled with analyte free water, the other empty. The analyte free water is poured over a decontaminated sample instrument into the identical empty containers. This blank is analyzed for the same parameters as the samples collected that day.

## 5.0 COST ESTIMATE

ANALYTICAL - (Includes):

(4) Sediments for P.P. Metals (2 Week TAT)
(4) Sediments for P.P. VOCs + 15
(2) Sediments for TCLP Metals (2 Week TAT)
(1) Sediment for TCLP Matrix Spike

(3) Waters for P.P. Metals
(3) Waters for P.P. VOCs + 15
(1) Field Blank for P.P. Metals and P.P. VOCs + 15 - $ 7,339.00

LABOR - (Includes):

(1) Field Sampling Specialist
(1) Field Technician for one day of field sampling, plus laboratory coordination, final report generation and project management - $ 2,150.00

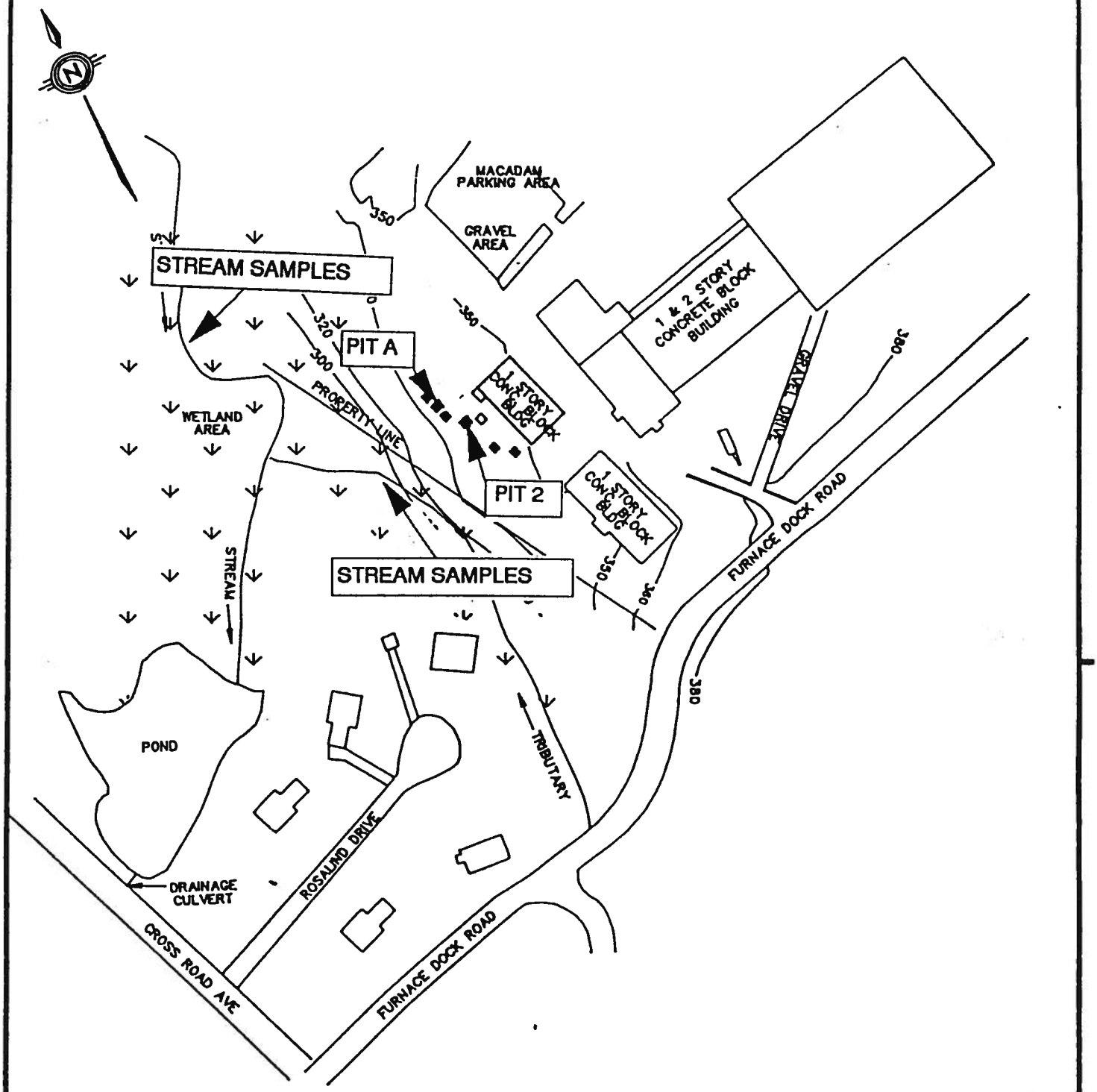
EQUIPMENT - (Includes):

Vehicle, Sampling Equipment, Materials and tolls for one (1) day - $ 150.00

**TOTAL COST - $ 9,639.00**

**TABLE 1**
**SUMMARY OF SAMPLING LOCATIONS**

| LOCATION | MATRIX | PARAMETERS |
|---|---|---|
| Pit 2 | Water | P.P. Metals<br>P.P. Volatile Organics |
| | Sediment | P.P. Metals<br>P.P. Volatile Organics |
| Pit A | Sediment | P.P. Metals<br>P.P. Volatile Organics |
| Pit 2 or Pit A | Sediment | TCLP Metals |
| Streams (2) | Water | P.P. Metals<br>P.P. Volatile Organics |
| | Sediment | P.P. Metals<br>P.P. Volatile Organics |
| Stream (1) | Sediment | TCLP Metals |




APPROXIMATE

200 100 0 200

SCALE IN FEET

SURFACE FEATURES FROM WESTCHESTER COUNTY, DEPARTMENT OF PLANNING AERIAL PHOTOGRAPH, SPRING 1990

TOPOGRAPHIC INTERPRETATION FROM NYSDEC, 1983

■ 6 TANKS/PITS LOCATED AS OF 3/28/91

| EBASCO SERVICES INCORPORATED | | |
|---|---|---|
| DEPT 940 | DR J.R. | APPROVED |
| DATE | CH | |
| SCALE 1"=200' | | |

FIGURE 1

***PROPOSED SAMPLING LOCATIONS***

**MAGNA METALS SITE**
**CORTLANDT, NY**